

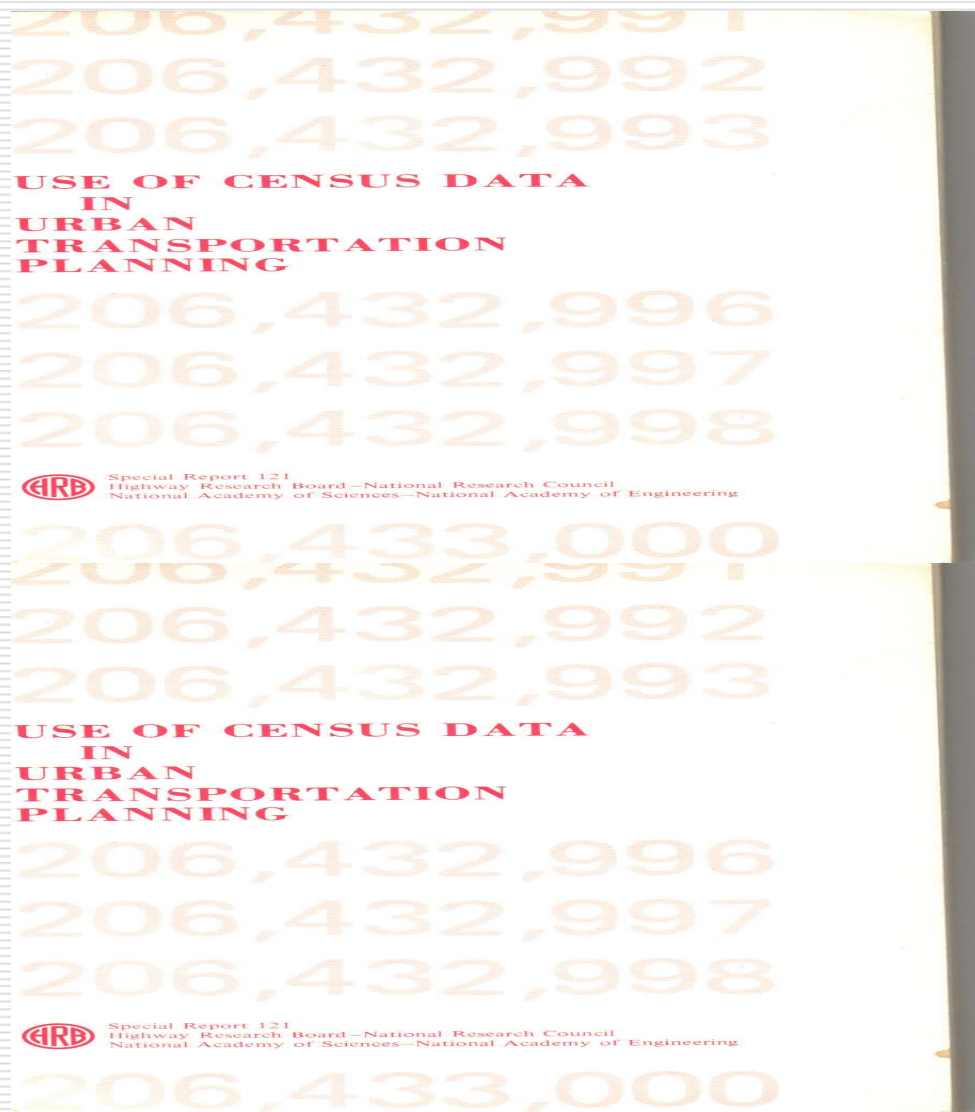
# **Workers in the Decennial Census and in the ACS**

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**Census Data for  
Transportation Planning:  
Preparing for the Future  
May 11-13, 2005  
TRB**

**Alan E. Pisarski**

# Some things never change!



**“Then there are the incompatibilities in the definitions of a worker in the census and in the standard transportation survey.”**

**AEP; SR 121,  
July 1970**

# **BACKGROUND - A little history**

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- Last confs: 1994 and again 1996**
- First discussion: 1970 HRB SR 121**
- First of these meetings Aug. 21-23, 1973**
- Second Dec. 9-12 1984**
- “What happened in last census/what should happen in next?”**

**THIS HAS THE FLAVOR OF 1994 WHEN WE THOUGHT THE WORLD WOULD CHANGE BUT WERE UNSURE HOW TO ADDRESS IT**

# **Use of Census Data for Urban Transportation Planning**

**Albuquerque, New Mexico  
August 21-23, 1973**

## **TENTATIVE PROGRAM**

**Cosponsored by Highway Research Board  
Committee on Transportation Information  
Systems and Data Requirements and the  
middle Rio Grande Council of Governments  
of New Mexico**

**National Conference  
on  
Decennial Census Data  
for  
Transportation Planning:  
1980 Experience and 1990 Needs**

**December 9-12, 1984  
Americana Dutch Resort Hotel  
Lake Buena Vista, Florida**

**Sponsored by**

**Office of the Secretary  
Research and Special Programs Administration  
Urban Mass Transportation Administration  
Federal Highway Administration  
U.S. Department of Transportation**

**Transportation Research Board  
National Research Council**

## **Why 2 conferences in 90's – When ACS was called “continuous monitoring”**

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- 94 Plans for CM/ACS were very unclear–  
we needed time to clarify and to plan**
  - CTPP heavily embedded in process**
  - Risk of losing major source of JTW**
  - We in transportation community took  
the subject very seriously**
  - “Bet your job” approach too dangerous**
  - Census went parallel paths**
  - We are better prepared now! (?)**
-

# The Worker Question

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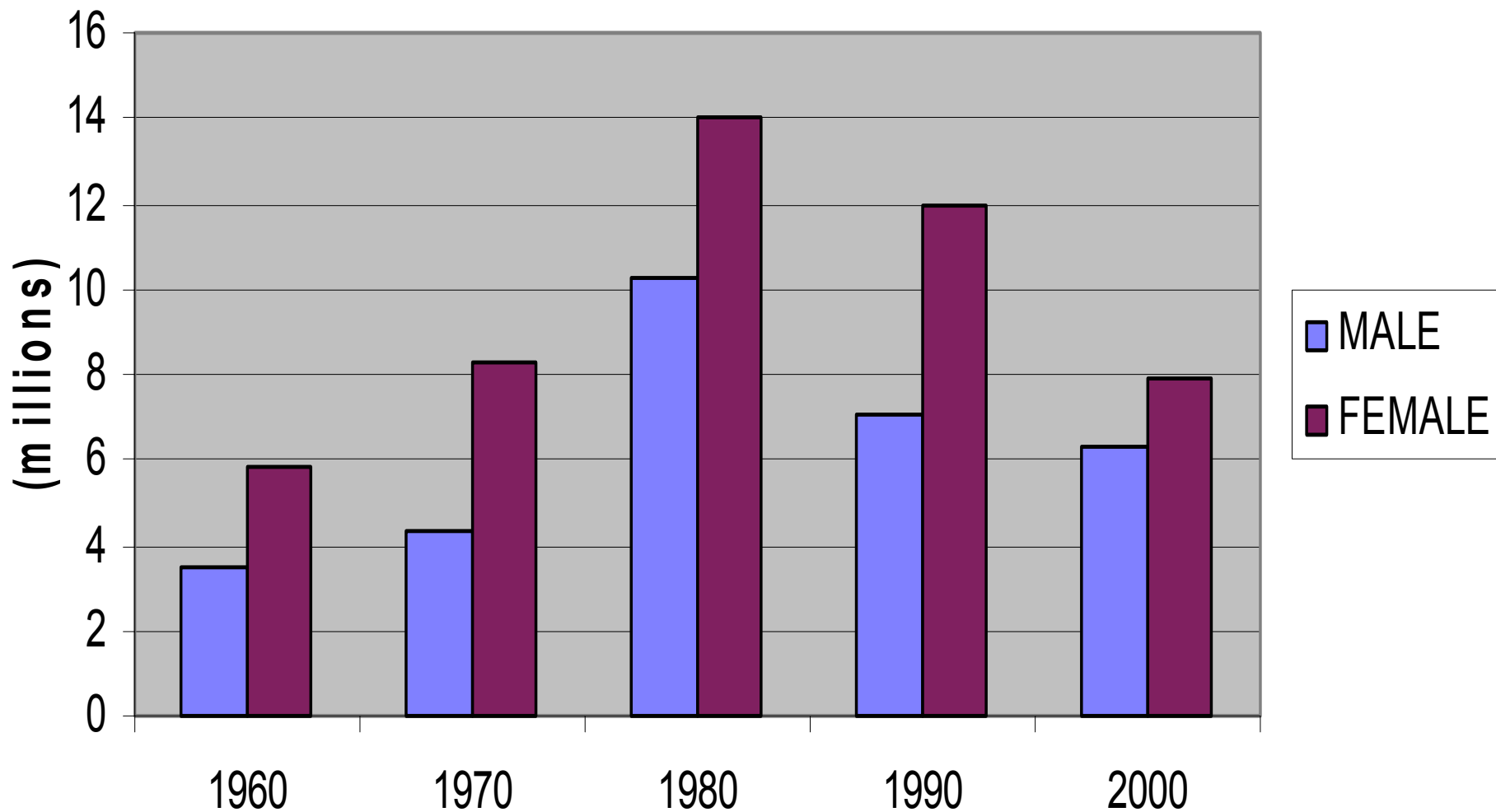
- ❑ To us the decennial and the ACS are surveys of workers
  - ❑ Yes of course demog is very valuable; but the specific transportation interest is all about the worker
  - ❑ Worker count and attributes
  - ❑ Activity variables associated with the worker:
  - ❑ Plus work location
-

# The Worker Question

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- Census tabulations do not reflect that
  - No reported workers per se
  - Find workers at mode use tabs; (but that is workers who worked last week)
  - Get workers from labor force
-

# MALE FEMALE LABOR FORCE INCREASE BY DECADE

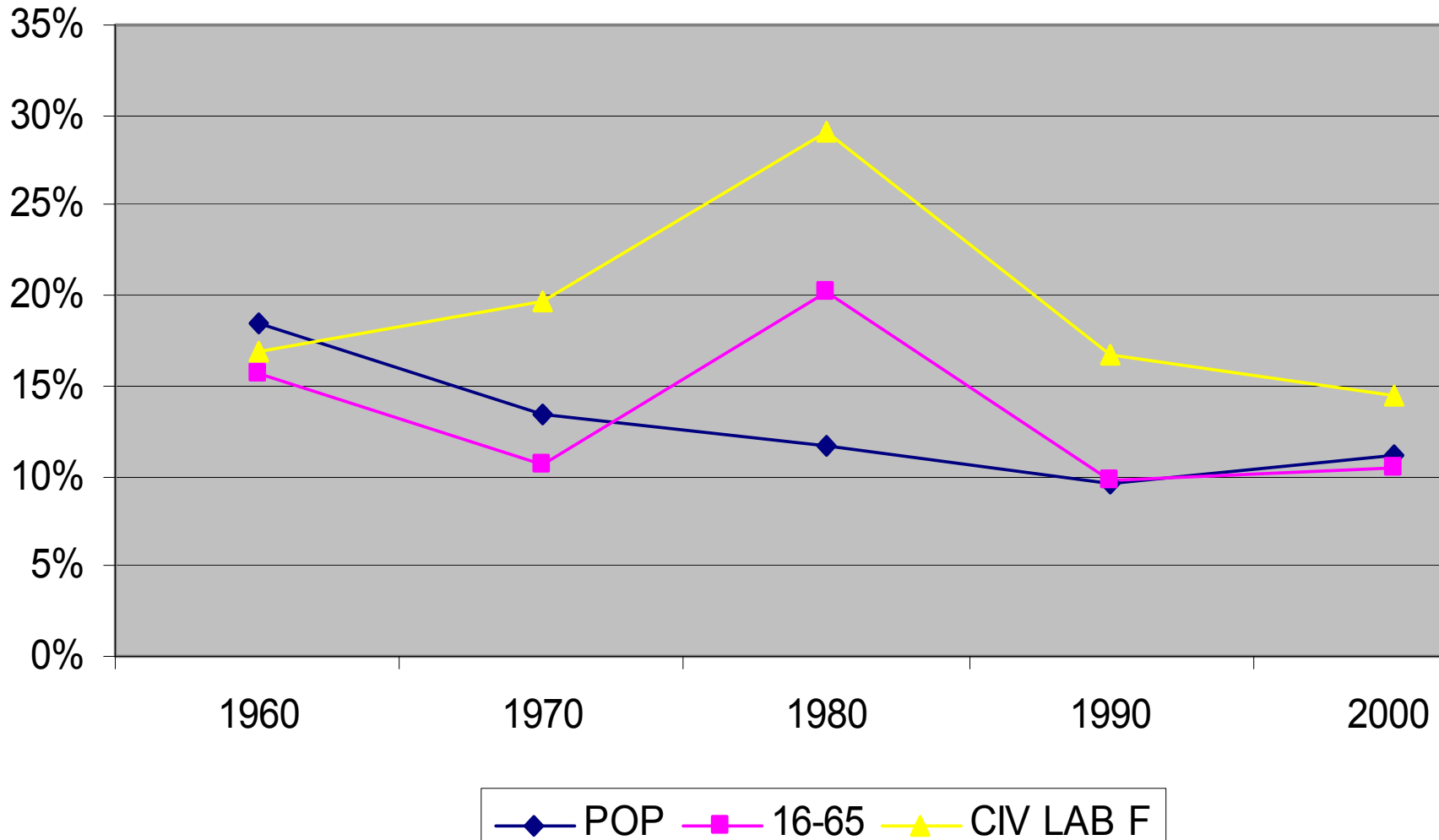




# Long term trend in Commuting

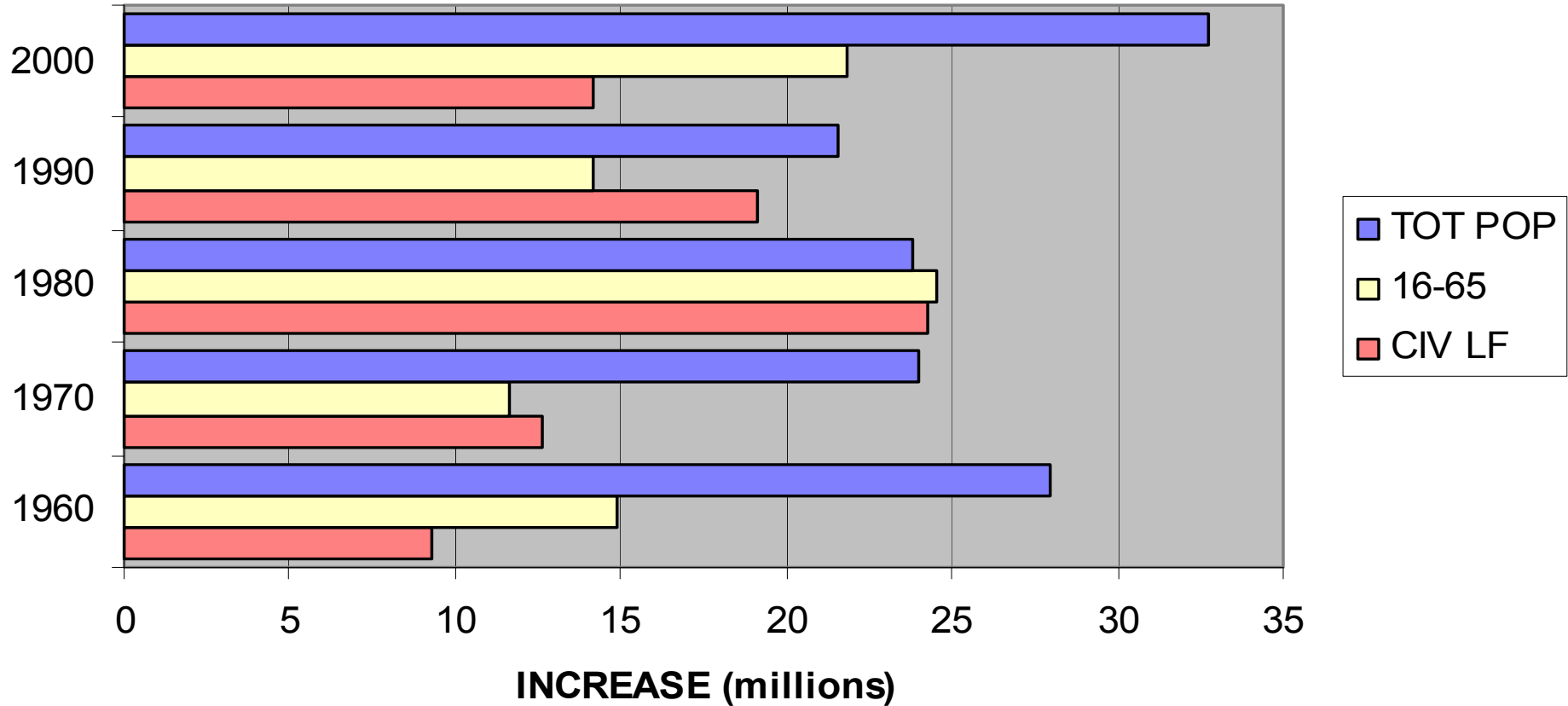
<b>YEAR</b>	<b>TOTAL WORKERS (millions)</b>	<b>WORKER INCREASE (millions)</b>	<b>WORKER INCREASE %</b>	<b>POPULATION INCREASE %</b>
<b>1950</b>	<b>58.9</b>			
<b>1960</b>	<b>65.8</b>	<b>6.9</b>	<b>11.7</b>	<b>18.5</b>
<b>1970</b>	<b>78.6</b>	<b>12.8</b>	<b>19.5</b>	<b>13.3</b>
<b>1980</b>	<b>96.7</b>	<b>18.1</b>	<b>23.0</b>	<b>11.4</b>
<b>1990</b>	<b>115.1</b>	<b>18.4</b>	<b>19.2</b>	<b>9.7</b>
<b>2000</b>	<b>128.3</b>	<b>13.2</b>	<b>11.5</b>	<b>13.2</b>
<b>OVERALL CHANGE</b>		<b>69.4</b>	<b>117.8</b>	<b>86.0</b>

# An important pattern to watch – pop vs pop 16-65 vs Civ LF



# Pop/Pop 16-65/LF trends

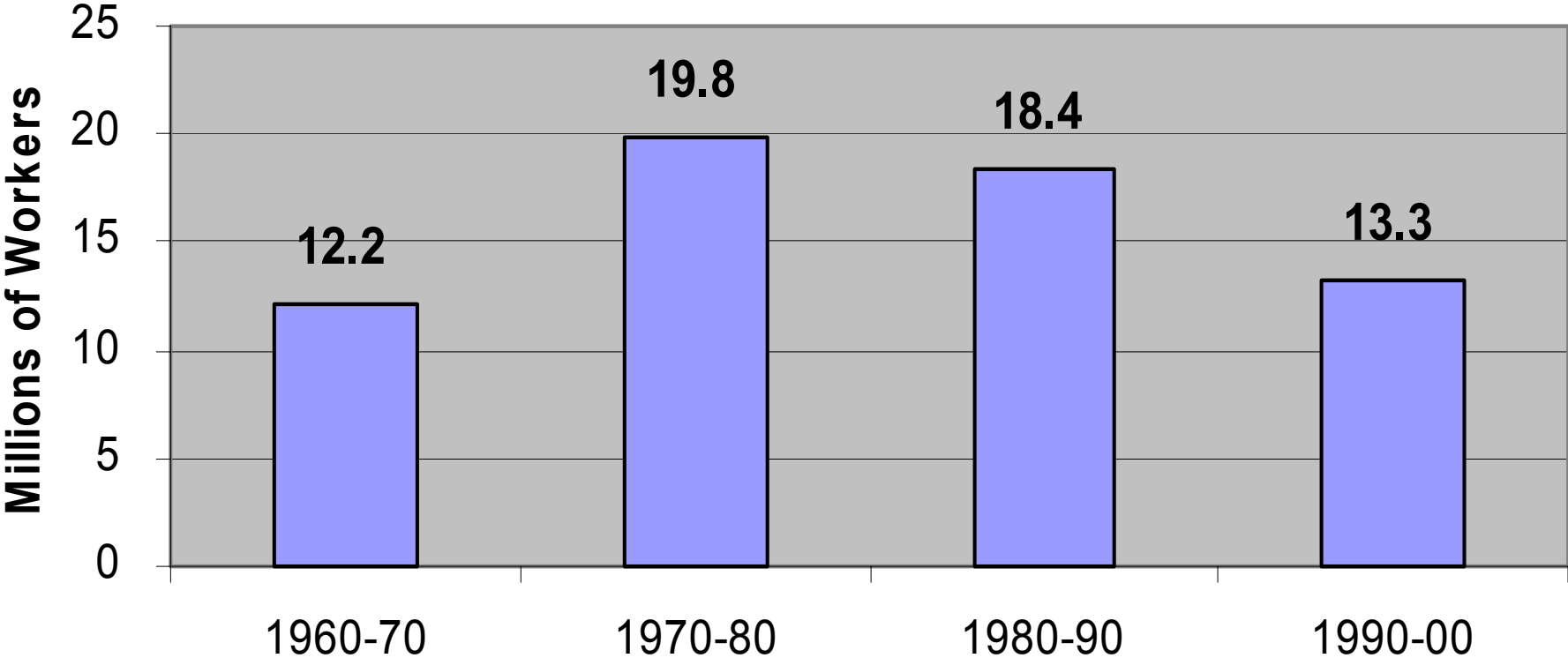
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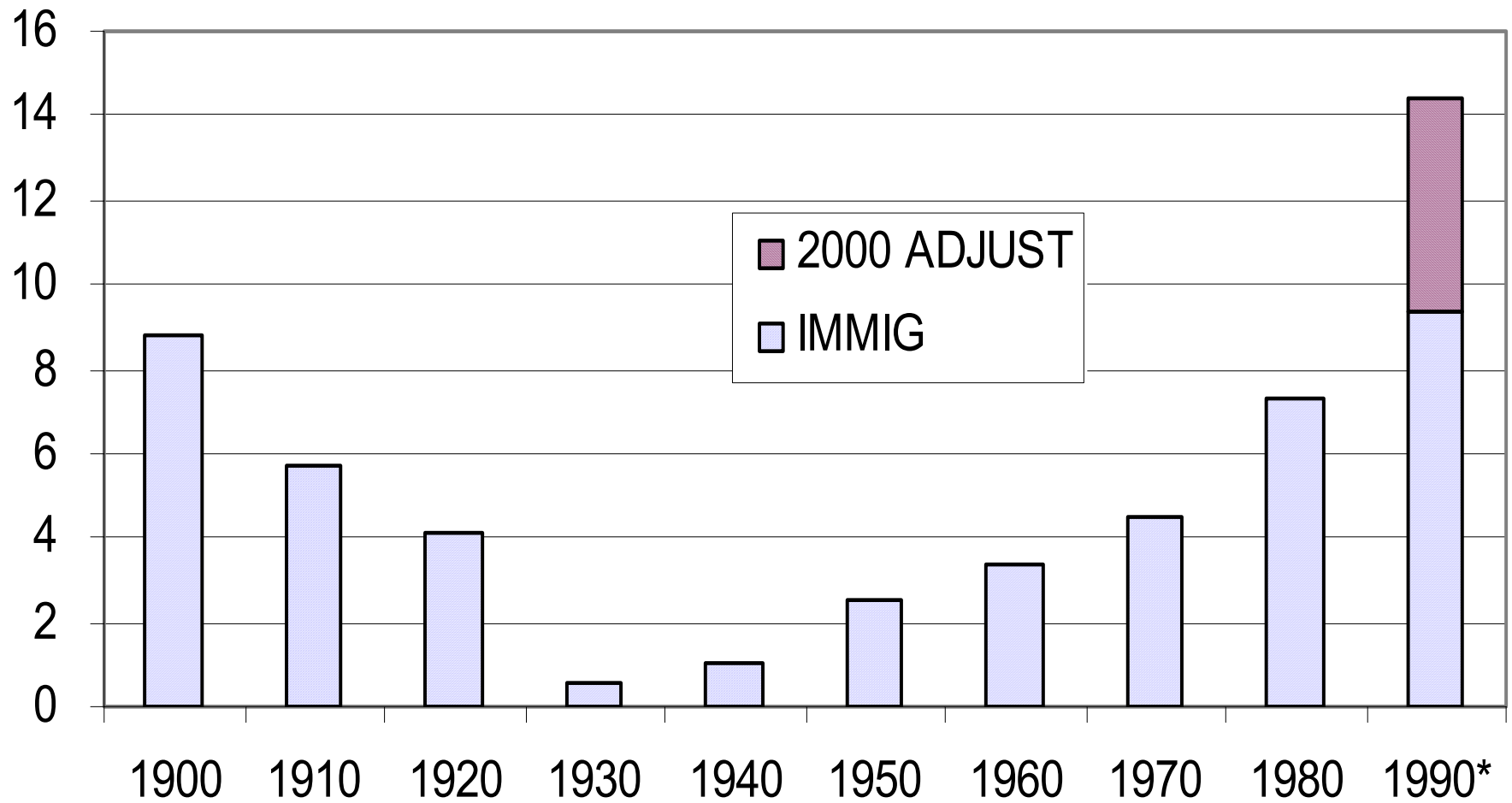
# Fewer Workers = Fewer Commuters

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**WORKERS ADDED PER DECADE**



# WE ARE A NATION OF IMMIGRANTS - AGAIN



# Decennial / C2SS comparisons

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- C2SS & Census almost identical structures
- No look at weeks worked or hours
- Small differences re workers (Nat'l)
- C2SS had higher LF partic and Unemp
  - **Census 65.2%**
  - **C2SS 66.2%**
- Emp. Status item allocation big difference:
  - **Census 11.1%**
  - **C2SS 6.0%**

ACS study

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# Decennial-CPS comparisons

## Civilian Labor Force

<b>CIV LF</b>	<b>DECEN (Millions)</b>	<b>CPS (Millions)</b>	<b>DIFF</b>	<b>% DIFF</b>
1950	58.2	61.5	3.3	5.67%
1960	67.5	69.1	1.6	2.37%
1970	80.1	82.0	1.9	2.37%
1980	104.4	105.6	1.2	1.15%
1990	123.5	124.8	1.3	1.05%
2000	137.7	142.2	4.5	3.27%

	<b>2000 DECEN</b>	<b>APRIL 2000 CPS</b>	<b>DIFFERENCE</b>
<b>UNEMPLOYED</b>	<b>7.9</b>	<b>5.2</b>	<b>2.7 million (50% higher)</b>
<b>EMPLOYED</b>	<b>129.7</b>	<b>136.9</b>	<b>7.2 million (5% lower)</b>
<b>CIV LF</b>	<b>137.7</b>	<b>142.2</b>	<b>4.5 million (3.2% lower)</b>
<b>WORKERS AT WORK</b>	<b>128.3</b>	<b>135.4 est.</b>	<b>7.1 million (5.2% lower)</b>



# Compared to CPS

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- ❑ **Tendency to show Emp as Unemp**
  - ❑ **Census 90% successful in placing CPS employed in employed**
  - ❑ **Census 86% successful in placing CPS not in LF in that category**
  - ❑ **Only 40% successful in placing CPS unemployed in unemployed**
  - ❑ **INDEX OF INCONSISTENCY!**
-

# There were group quarters distortions

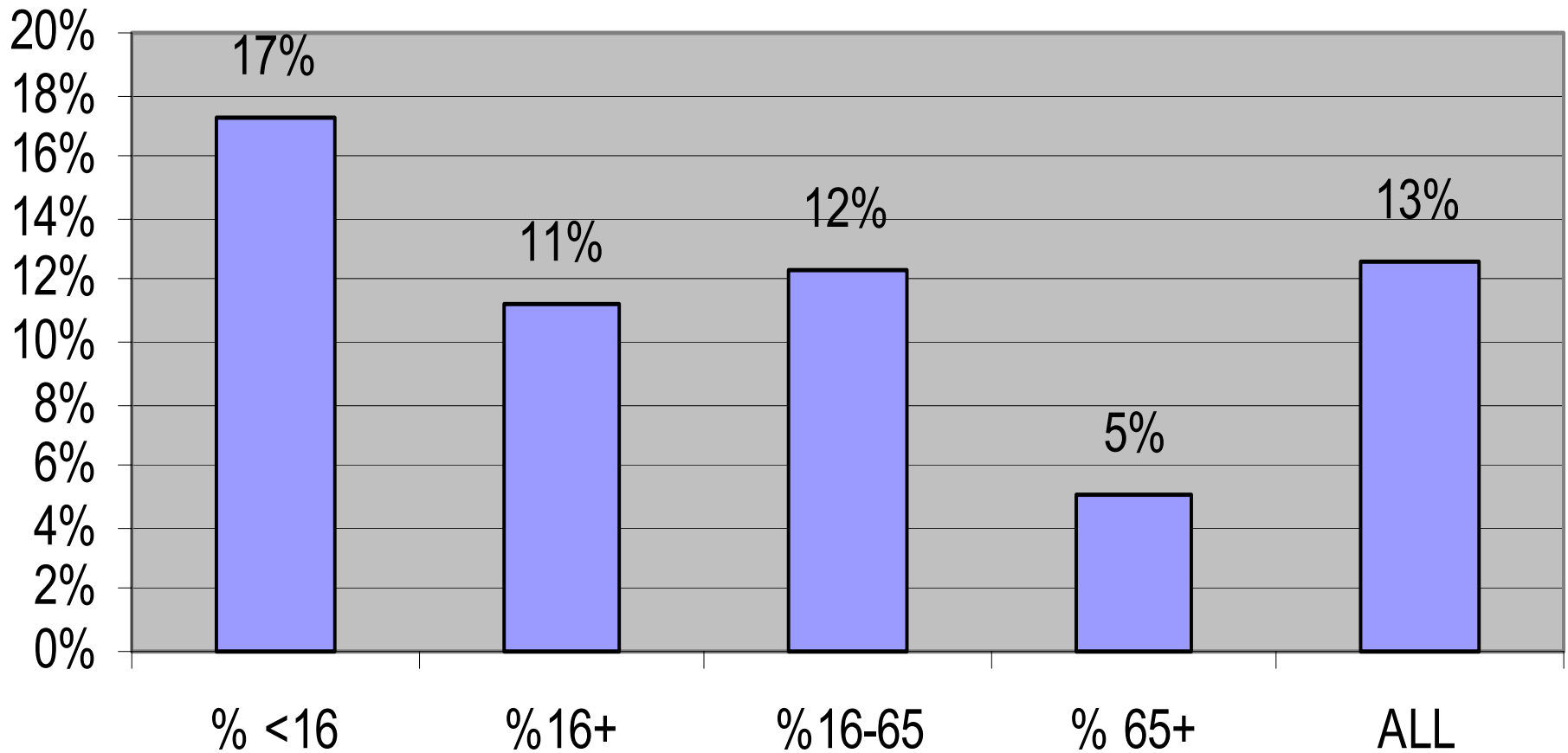
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- ❑ **College campuses went wrong somewhere**
  - ❑ **If omit GQ: decennial unemployment rate drops from 5.8% to 5.2% - much closer to CPS**
  - ❑ **Athens, Ga. 16-19 yr olds (10% of pop) with 35% unemployment rates**
-

# Group Distortions – Emp./Pop.

<b>Variable</b>	<b>Cen 2000</b>	<b>April CPS</b>	<b>Diff.</b>
<b>All</b>	<b>61.2</b>	<b>64.6</b>	<b>3.4</b>
<b>Pop 25+</b>	<b>62.2</b>	<b>65.7</b>	<b>3.5</b>
<b>Pop 65+</b>	<b>13.1</b>	<b>12.5</b>	<b>-.6</b>
<b>Male</b>	<b>68.1</b>	<b>71.8</b>	<b>3.7</b>
<b>Female</b>	<b>54.9</b>	<b>57.9</b>	<b>3.0</b>
<b>White</b>	<b>62.4</b>	<b>65.1</b>	<b>2.7</b>
<b>Black</b>	<b>55.5</b>	<b>61.4</b>	<b>5.9</b>
<b>Hispanic</b>	<b>56.4</b>	<b>66.1</b>	<b>9.7</b>

# HISPANIC SHARE OF POPULATION BY WORKING AGE GROUPS



# Geographic Distortions

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- ❑ In no state is Census higher than CPS in Emp/Pop ratio
  - ❑ 32 state's differences not statistically signif.
  - ❑ Some states saw major swings in Emp.
    - CA – 1.3 million
    - FL – .5 million
    - TX – .7 million
-

# Estimates of impacts

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- 7 million worker gap (5? 3?)
  - State specific?
  - Hispanics not reporting work?
  - Older workers looks too good?
  - Differences strong among young and less educated and some work classes = questions too hard?
  - Is work a more fluid situation?
-

# **THE WORK/WORKER VARIABILITY ISSUE**

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- MULTI-JOBS PER WORKER**
  - PART TIME/OCCASIONAL**
  - JOB LOCATION**
  - START TIMES**
  - MODE/ROUTE**
  - NATURE OF WORK**
-

# Cannot be resolved now! (?)

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- Need to get at individual records
  - Not available until microfiching done in 2006!
  - Consider:
    - State impacts?
    - Metro impacts?
    - Other area/functional impacts?
-



# For the Future

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- ACS and CPS benchmarked to census**
  - And future benchmarks to same pop estimates**
  - Variations will be in emp/pop ratios**
  - Will census make linkages more transparent?**
  - Is ATUS part of this set?**
  - Will we have 3 integrated surveys?**
-

# QUESTIONS

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- Will we have an official undercount statement from census?
  - Will additional research pin down the issues and problems further?
  - What about state and metro undercounts/overcounts?
  - How big an issue for the future?
-

# **Thank you !**

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**Alan E. Pisarski**

206,432,991  
206,432,992  
206,432,993

**USE OF CENSUS DATA  
IN  
URBAN  
TRANSPORTATION  
PLANNING**

206,432,996  
206,432,997  
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Special Report 121  
Highway Research Board—National Research Council  
National Academy of Sciences—National Academy of Engineering

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# Recommendations

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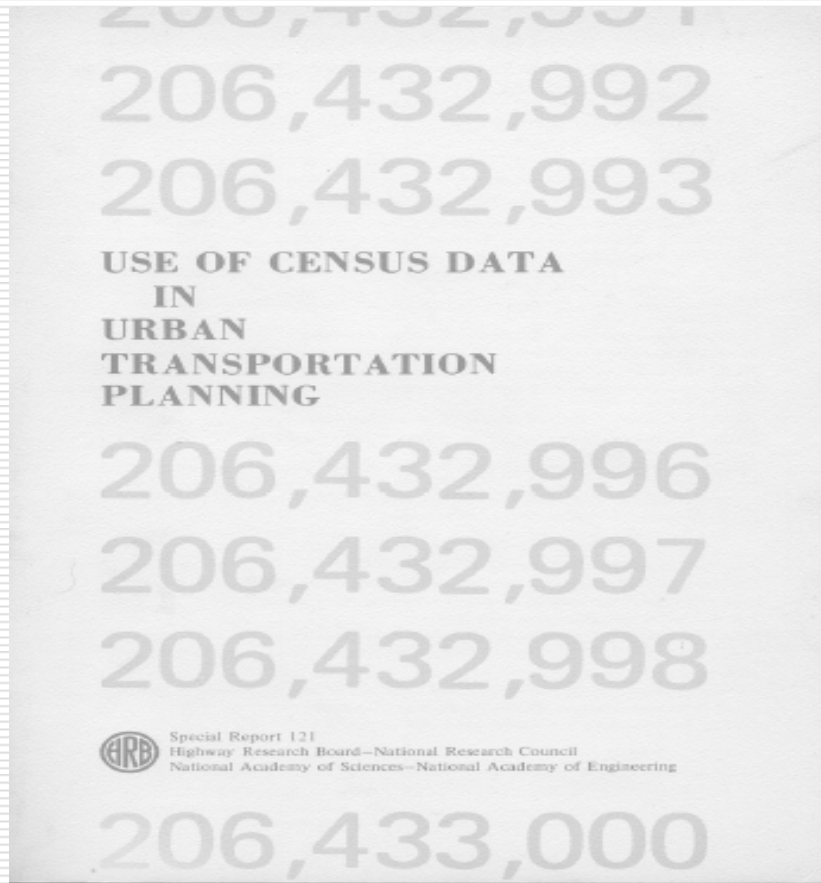
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**“Then there are the incompatibilities in the definitions of a worker in the census and in the standard transportation survey.”**

**AEP; SR 121,  
July 1970**

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- “Then there are the incompatibilities in the definitions of a worker in the census and in the standard transportation survey.”
- “Finally there is the problem of relating the work trip to other, more comprehensive transportation measures such as peak hour travel and total trips.”

Alan E. Pisarski, Use of Census Data for  
Transportation Planning, **SR 121, July 1970**

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